

Claims

1. Radar unit comprising
an antenna, an arbitrary waveform generator (AWG 9) issuing a an arbitrary (periodic) radar waveform signal at a given pulse repetition frequency (PRF), the AWG unit being adapted for adjusting the phase of the radar waveform signal as a function of a phase adjustment signal,
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a transmit amplifier (TX) coupled to the antenna,
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a receive unit (RX) coupled to the antenna,
a 2D filter for generating associate values of radar response and coordinate data,
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at least a noise prediction means coupled the receiver for receiving at least one prevalent radio frequency interference (RFI),
a demodulation and decoding bank (10) comprising known information on the modulation and coding principle of the prevalent RFI signal, the RFI signal typically
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operating according to a predetermined refresh frequency at which redundant information is repeated (50Hz),
the noise prediction means (3, 4, 5, F1, 7, 12) receiving, demodulating and decoding the information content of the at least one RFI signal.
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2. Radar system according to claim 1, wherein
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the noise prediction means generating a phase adjustment signal (S3) effecting that the arbitrary radar waveform signal is changed such that for a given RFI signal the phase of the radar signal is synchronous with the periodicity of the RFI signal.
3. Radar unit according to claim 1, wherein
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the predicted RFI signal is subtracted from the combined radar and RFI signal.

5 4. Radar unit according to claim 2, wherein the frequency spectrum is divided into a plurality of sub-channels, each sub-channel corresponding to a regulatory radio channel used for one radio or television information source, the radar unit comprising a noise prediction means for each RFI sub-channel overlapping with the radar range.

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